Spring and Summer Wetlands Boost Pheasant Survival

GREG YAVRIS/CALIFORNIA WATERFOWL ASSOCIATION

A Department of Fish and Game study showed that shallow wetlands are vital to young pheasants in the hot Central Valley during the early months of their lives.

"In the spring I get a great hatch of pheasants and within weeks, they're gone. Not a youngster to be seen." That's what several Central Valley farmers told Ed Smith, a Department of Fish and Game Senior Wildlife Biologist. "They all wanted to know what was happening to their pheasants and that got us thinking," said Smith. "We actually had the same trend occurring on most of our own wildlife areas."

To find some answers, the Department used radio telemetry equipment to study young pheasants for three years, and here's what they learned. Shallow wetlands are vital to young pheasants during spring and summer. Pheasant chicks rely on wet areas to provide a reservoir of hatching insects to sustain them as they are growing; in fact, they depend entirely on insects for food during the first two weeks of life. Most Central Valley pheasants hatch in May and June. At the same time, rising ambient temperatures dry up most of the seasonal wetlands formed by spring rains, eliminating habitat for insect development and pheasant brood survival.

Based on these findings, Smith—who leads Fish and Game's statewide Wildlife Area Habitat Evaluation Team—began providing spring and summer wet areas for pheasants at Mendota Wildlife Area and was stunned by the results.

"We worked with a University of California entomologist to develop the right kind of wet area for insect production," said Smith. "Areas as small as one-half acre and just inches deep seemed to work, but the sides must have feathered edges to provide green vegetation to support insects. Even though the first pheasant broods don't appear until April, these insect-producing areas need to be available in February to give ample time for insect development."

The first year this water regimen was followed, pheasant brood survival during the first two weeks of life jumped significantly. But apparently, this was only half of the equation because surveys showed that few of those broods actually survived to adulthood. Smith and crew learned that they allowed water sources to dry too soon. "Wet areas should be maintained at least through July," he advises.

The availability of wet areas during the summer months remains crucial to pheasant survival because these cool microclimates help youngsters cope with San Joaquin Valley temperatures routinely in excess of 100 degrees. "This is borne out in the Midwest," says Smith, "where summer pheasant mortality rates are also higher than winter rates—even in states with heavy snowfall."

The following two summers Fish and Game maintained wet areas at Mendota Wildlife Area until late August and this small modification paid off. "The pheasant population increased and the harvest doubled the first year and nearly doubled again the second year, " reflected Smith. "There was a four-fold increase in pheasant harvest in just two years." As an added bonus, Smith also saw high concentrations of shorebirds and duck broods on these seasonal ponds, all drawn by the diverse aquatic and terrestrial invertebrates available. They found it was better to have several small, scattered ponds, rather than one large one.

Now, when farmers ask how to help the pheasants and ducks they're hatching to survive, Smith has a proven answer: "Take a low spot in a crop field, a fallowed field, or a non-farmed area and keep it wet, with feathered edges, from February to September. If you have five-to-six acre-feet of water available, you can maintain a one-acre marsh that will boost your pheasant and duck survival."